

CLAIMS

What is claimed is:

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1. A rocker mechanism adapted for operably interconnecting a chair to a base, comprising:
 - an upper casting adapted for interconnection with the chair;
 - a lower casting adapted for interconnection with the base; and
 - a dual-rate spring mechanism interconnecting said upper and lower castings, said dual-rate spring mechanism having a first effective spring rate for rocking in a first direction and a second effective spring rate for rocking in a second direction.
2. The rocker mechanism of claim 1, wherein said dual rate spring mechanism includes a first leaf spring having first and second effective lengths defining said first and second effective spring rates.
3. The rocker mechanism of claim 2, wherein said first effective length of said first leaf spring is defined as a distance between a face of said upper casting and a face of said lower casting.
4. The rocker mechanism of claim 2, wherein said second effective length of said first leaf spring is defined as a distance between connection points of said first leaf spring to said upper casting and said lower casting.

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5. The rocker mechanism of claim 2, further comprising a second leaf spring interconnecting said upper and lower castings, whereby said second leaf spring includes first and second effective lengths for defining first and second effective spring rates of said second leaf spring.

6. The rocker mechanism of claim 5, wherein said first effective length of said second leaf spring is defined as a distance between a face of said upper casting and a face of said lower casting.

7. The rocker mechanism of claim 5, wherein said second effective length of said second leaf spring is defined as a distance between connection points of said second leaf spring to said upper casting and said lower casting.

8. The rocker mechanism of claim 1, further comprising a plurality of stops defined by a top surface of said lower casting, wherein relative pivotal motion between said upper and lower castings is limited by contact of one of said plurality of stops to a bottom surface of said upper casting.

9. The rocker mechanism of claim 8, further comprising first and second boots extending between said upper and lower castings for respectively covering said plurality of stops.

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10. The rocker mechanism of claim 1, wherein said spring mechanism is preloaded for defining a relative rest position between said upper and lower castings.

11.1
11. A rocker mechanism adapted for operably interconnecting a chair to a base, comprising:

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an upper casting;
a lower casting;
first and second leaf springs interconnecting said upper and lower castings for relative pivotal motion therebetween, said first and second leaf springs extending angularly between said upper and lower castings for maximizing a length of each of said first and second leaf springs.

12.1
12. The rocker mechanism of claim 11, wherein said upper and lower castings define first and second effective lengths of each of said first and second leaf springs for affecting pivoting of said upper casting relative to said lower casting.

13.1
13. The rocker mechanism of claim 12, wherein said first effective length of each of said first and second leaf springs is defined as a distance between faces of said upper casting and faces of said lower casting.

14. The rocker mechanism of claim 12, wherein said second effective length of each of said first and second leaf springs is defined as a distance between connection points of said first and second leaf springs to said upper casting and said lower casting.

15. The rocker mechanism of claim 11, further comprising a plurality of stops defined by a top surface of said lower casting, wherein relative pivotal motion between said upper and lower castings is limited by contact of one of said plurality of stops to a bottom surface of said upper casting.

16. The rocker mechanism of claim 15, further comprising boots associated with each of said plurality of stops extending between said upper and lower castings for respectively covering each of said plurality of stops.

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17. A chair assembly comprising:

- a seat frame including a seat back and a seat;
- a base; and
- a rocker mechanism adapted to operably interconnect said seat and said base, said rocker mechanism comprising:
 - an upper casting adapted for interconnection with the chair;
 - a lower casting adapted for interconnection with the base; and
 - a dual rate spring mechanism interconnecting said upper and lower castings, said dual rate spring mechanism having a first effective spring rate for rocking in a first direction and a second effective spring rate for rocking in a second direction.

18. The chair assembly of claim 17, wherein said dual rate spring mechanism includes a leaf spring having first and second effective lengths defining said first and second effective spring rates.

19. The chair assembly of claim 18, wherein said first effective spring length of said first spring is defined as a distance between a face of said upper casting and a face of said lower casting.

20. The chair assembly of claim 18, wherein said second effective length of said leaf spring is defined as a distance between connection points of said leaf spring to said upper casting and said lower casting.

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21. The chair assembly of claim 17 further comprising a recliner mechanism operably interconnecting said seat frame and said base such that said seat frame is positionable between an upright position and a reclined position.

22. The chair assembly of claim 22 further comprising a recline stop mechanism defining said upright position and said reclined position.

23. The chair assembly of claim 17 further comprising a spindle assembly operably interconnecting said rocker mechanism to provide relative swivel motion therebetween.

24. The chair assembly of claim 17, further comprising a plurality of stops defined by a top surface of said lower casting, wherein relative pivotal motion between said upper and lower castings is limited by contact of one of said plurality of stops to a bottom surface of said upper casting.

25. The chair assembly of claim 24, further comprising first and second boots extending between said upper and lower castings for respectively covering said plurality of stops.

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26. The chair assembly of claim 17, wherein said dual-rate spring mechanism is preloaded for defining a relative rest position between said upper and lower castings.